WATER SUPPLY OUTLOOK
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS
for
MONTANA

UNITED STATES DEPARTMENT of AGRICULTURE···SOIL CONSERVATION SERVICE
and
MONTANA AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above in cooperation with Federal, State, and private organizations listed on the inside back cover of this report.

AS OF
APR. 1, 1965

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

To Recipients of Water Supply Outlook Reports:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from advance estimates of the streamflow.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, up to 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1400 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

Streamflow forecasts are obtained by a comparison of total or maximum snow accumulation, as measured by snow water equivalent, to the subsequent spring and summer or snowmelt season runoff over a period of years. The snow water equivalent measured in selected snow courses provides most of the index to the streamflow forecast for the following season. More accurate forecasts are usually obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast procedure. Early season forecasts assume average climatic conditions through the snowmelt season.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions. Soil Conservation Service Reports may be secured from Soil Conservation Service, 511 N.W. Broadway - Room 507, Portland, Oregon 97209.

PUBLISHED BY SOIL CONSERVATION SERVICE

REPORTS	ISSUED	LOCATION	COOPERATING WITH
RIVER BASINS			
WESTERN UNITED STATES	MONTHLY (FEB.-MAY)	PORTLAND, OREGON	ALL COOPERATORS
BASIC DATA SUMMARY	OCTOBER 1	PORTLAND, OREGON	ALL COOPERATORS
STATES			
ALASKA	MONTHLY (MAR.-MAY)	PALMER, ALASKA	ALASKA S.C.D.
ARIZONA	SEMI-MONTHLY (JAN.15 - APR.1)	PHOENIX, ARIZONA	SALT R. VALLEY WATER USERS ASSOC. ARIZ. AGR. EXP. STATION
COLORADO AND NEW MEXICO	MONTHLY (FEB.-MAY)	FORT COLLINS, COLORADO	COLO. STATE UNIVERSITY COLO. STATE ENGINEER N. MEX. STATE ENGINEER
IDAHO	MONTHLY (JAN.-JUNE)	BOISE, IDAHO	IDAHO STATE RECLAMATION ENGINEER
MONTANA	MONTHLY (JAN.-JUNE)	BOZEMAN, MONTANA	MONT. AGR. EXP. STATION
NEVADA	MONTHLY (JAN.-MAY)	RENO, NEVADA	NEVADA DEPT. OF CONSERVATION AND NATURAL RESOURCES DIVISION OF WATER RESOURCES
OREGON	MONTHLY (JAN.-JUNE)	PORTLAND, OREGON	OREG. STATE UNIVERSITY OREGON STATE ENGINEER
UTAH	MONTHLY (JAN.-JUNE)	SALT LAKE CITY, UTAH	UTAH STATE ENGINEER
WASHINGTON	MONTHLY (FEB.-JUNE)	SPOKANE, WASHINGTON	WN. STATE DEPT. OF CONSERVATION
WYOMING	MONTHLY (FEB.-JUNE)	CASPER, WYOMING	WYOMING STATE ENGINEER

PUBLISHED BY OTHER AGENCIES

REPORTS	ISSUED	AGENCY
BRITISH COLUMBIA	MONTHLY (FEB.-JUNE)	WATER RESOURCES SERVICE, DEPT. OF LANDS, FOREST AND WATER RESOURCES, PARLIAMENT BLDG., VICTORIA, B.C., CANADA
CALIFORNIA	MONTHLY (FEB.-MAY)	CALIF. DEPT. OF WATER RESOURCES, P.O. BOX 388, SACRAMENTO, CALIF.

USDA SCS PORTLAND OREG 1964

WATER SUPPLY OUTLOOK

FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS

for

MONTANA

Report Prepared

By

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and

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Box 855
Bozeman, Montana

Issued By

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State Conservationist
Soil Conservation Service
Bozeman, Montana

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MONTANA
WATER SUPPLY OUTLOOK
as of
April 1, 1965

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* * * * * * * * * * * * * * * * * * * * * * * * *
*                                               *
* High elevation snow continues to store record *
* or near record amounts of water.  Median      *
* elevations have above average and low eleva-  *
* tions have near to below average snow pack.   *
* Streamflow is forecast to rank between sixth  *
* and second highest flow that has occurred in  *
* the past 30 years.  Near average flows are    *
* expected on the Kootenai River drainage.      *
* Generally, the irrigation water supply out-   *
* look is very good to excellent with a         *
* prospect for above average late season        *
* supplies.                                     *
*                                               *
* * * * * * * * * * * * * * * * * * * * * * * * *
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The mountain snow pack west of the divide contains about 10 to 25 percent more water than it did last year at this time and is 10 to 30 percent above the 15 year average. Snow cover in the Kootenai River drainage, including that portion in British Columbia, is about 10 percent greater than a year ago and 7 percent above the 1948-62 average. The greatest snow pack, percentagewise, encompasses the headwaters of the Clark Fork River.

East of the divide the Missouri River headwaters have a snow pack about one-third greater than a year ago and 35 percent above average. Drainages tributary to the Missouri River below the junction of the Jefferson, Madison and Gallatin Rivers have a mountain snow pack that is about one-third greater than the 1948-62 average.

MONTANA
WATER SUPPLY OUTLOOK
as of
April 1, 1965

* *
*
* High elevation snow continues to store record *
* or near record amounts of water. Medium *
* elevations have above average and low elevations *
* have been to below average snow pack. *
* Streamflow is forecast to rank between sixth *
* and second highest flow that has occurred in *
* the past 30 years. Most average flows are *
* expected on the Kootenai River drainage. *
* Generally, the irrigation water supply outlook *
* looks as very good to excellent with a *
* prospect for above average late season *
* supplies. *
*
* *

The mountain snow pack west of the divide contains about 10 to 25 percent more water than it did last year at this time and is 10 to 20 percent above the 15 year average. Snow cover in the Kootenai River drainage, including that portion in British Columbia, is about 10 percent greater than a year ago and 7 percent above the 1949-62 average. The greatest snow pack, percentagewise, encompasses the headwaters of the Clark Fork River.

East of the divide the Missouri River headwaters have a snow pack about one-third greater than a year ago and 25 percent above average. Increases tributary to the Missouri River below the junction of the Jefferson, Madison and Gallatin Rivers have a mountain snow pack that is about one-third greater than the 1949-62 average.

Irrigation water supplies coming from snowfed streams will be good to excellent over the entire state. The outlook for late season water supplies is especially good, as the above average high elevation snow is very dense and will resist melt more than would a less dense pack.

Runoff during the April through September period is forecast to be near average on the Kootenai River and its tributaries. The remainder of streams in the Columbia drainage, including the Flathead, Blackfoot, Clark Fork and Bitterroot are forecast to produce the second to fifth highest volume that has occurred in the past 30 years.

Runoff east of the divide is expected to be third to fourth highest in the past 30 years on headwater streams of the Missouri River. Streams tributary to the Missouri River are forecast to produce less runoff, ranking between fifth and eighth highest. The Yellowstone River and tributaries are forecast to produce between third and fourth highest volume since 1935, except on the Clarks Fork of the Yellowstone River where runoff should rank fifth or sixth highest.

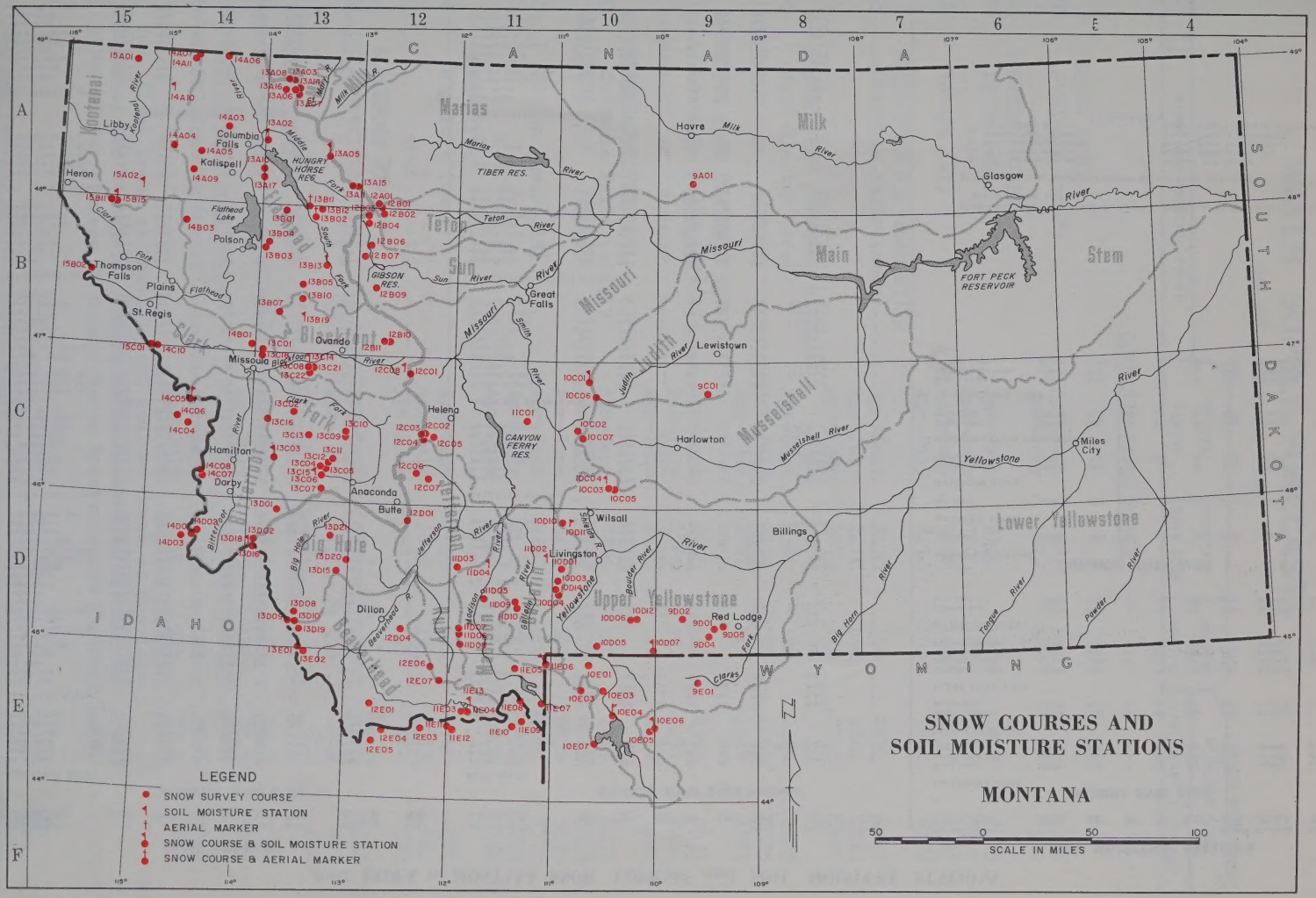
Reservoirs are expected to be drawn down so that available storage can be used to reduce peak flows. The size of peak flows that occur this year will be largely dependent on temperatures and precipitation during the main snowmelt period. Below or near average climatic conditions will permit the large volume of runoff to pass down the river channels with little damage. Likewise, above average conditions, particularly heavy rains on a warm and ripe snow pack will cause rivers and streams to leave their channels.

Irrigation water supplies coming from snowfed streams will be good to excellent over the entire state. The outlook for late season water supplies is especially good, as the above average high elevation snow is very dense and will yield much more than would a less dense pack.

Runoff during the April through September period is forecast to be near average on the Kootenai River and its tributaries. The remainder of streams in the Columbia Drainage, including the Flathead, Blackfoot, Clark Fork and Bitterroot are forecast to produce the seventh to fifth highest volume that has occurred in the past 30 years.

Runoff east of the divide is expected to be third to fourth highest in the past 30 years in Deadwater streams of the Missouri River. Streams tributary to the Missouri River are forecast to produce less runoff, ranking between fifth and eighth highest. The Yellowstone River and tributaries are forecast to produce between third and fourth highest volume since 1931, except on the Clarks Fork of the Yellowstone River where runoff should rank fifth or sixth highest.

Reservoirs are expected to be drawn down as much available storage can be used to reduce peak flows. The size of peak flows that occur this year will be largely dependent on temperatures and precipitation during the main snowmelt period. Below or near average atmospheric conditions will permit the large volume of runoff to pass down the river channels with little damage. Although, above average conditions, particularly heavy rains on a warm and ripe snow pack will cause rivers and streams to leave their channels.


SNOW COURSES AND
SOIL MOISTURE STATIONS
MONTANA
LEGEND
SNOW SURVEY COURSE
SOIL MOISTURE STATION
AERIAL MARKER
SNOW COURSE & SOIL MOISTURE STATION
SNOW COURSE & AERIAL MARKER
SCALE IN MILES
CANADA
IDAHO
WYOMING
SOUTH DAKOTA
Libby
Columbia Falls
Kalispell
Heron
Polson
Thompson Falls
Plains
St. Regis
Missoula
Ovando
Helena
Hamilton
Darby
Anaconda
Butte
Dillon
Great Falls
Havre
Glasgow
Lewistown
Harlowton
Wilsall
Livingston
Billings
Miles City
Red Lodge
TIBER RES.
GIBSON RES.
CANYON FERRY RES.
FORT PECK RESERVOIR
HUNGRY HORSE RES.
Flathead Lake
Kootenai
Marias
Milk
Teton
Sun
Missouri
Judith
Musselshell
Yellowstone
Lower Yellowstone
Upper Yellowstone
Big Hole
Bitterroot
Madison
Gallatin
Beaverhead
Jefferson
Clark Fork
Flathead
Swan
Stillwater
Clarks Fork
Big Horn
Tongue
Powder
Main Stem

1965 INDEX to MONTANA SNOW COURSES and SOIL MOISTURE STATIONS

SNOW COURSES

COLUMBIA RIVER BASIN

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
KOOTENAI RIVER								
Baree Creek	15B11	5500	36	26N	31W	1956	3,4,5,5½	2
Baree Trail	15B12	3800	5	25N	30W	1965	3,4,5,5½	2
Brush Creek	14A04	5000	12	30N	26W	1937	3,4,5	1,2
Graves Creek	14A11	4300	1	36N	25W	1965	3,4,5,5½	1,2
Red Mountain	15A01	6000	4	36N	29W	1937	3,4,5,5½,6	1,2
Weasel Divide	14A07	5450	20	37N	24W	1937	3,4,5,5½,6	1,2
FLATHEAD RIVER								
Bassoo Peak	14B03	5150	11	24N	25W	1961	3,4,5	1,5
Beaver Lake	13A11	5900	31	28N	11W	1964	3,4,5	1
Big Creek	13B03	6750	7	22N	18W	1941	3,4,5, 6	1,5
Camp Misery	13A17	6400	30	28N	18W	1960	3,4,5	1,2
Desert Mountain	13A02	5600	24	31N	19W	1937	1,2,3,4,5, 6	1,2
Fatty Creek	13B04	5500	8	22N	18W	1962	3,4,5, 6	1,5
Griffin Creek Divide	14A09	5150	11	28N	25W	1960	3,4,5	1,5
Gunsight Lake	13B12	6300	35	26N	14W	1964	3,4,5	1
Hell Roaring Divide	14A03	5770	35	32N	22W	1942	1,2,3,4,5,5½,6	2
Holbrook	13B13	4530	18	21N	13W	1951	1,2,3,4,5	1
Kishenehn	14A06	3890	14	37N	22W	1954	3,4	6
Logan Creek	14A05	4300	34	30N	24W	1937	3,4,5	1,2
Marias Pass	13A05	5250	34	30N	14W	1934	1,2,3,4,5	3
Mineral Creek	13A16	4000	29	35N	17W	1957	3,4,5	6
North Fork Jocko	13B07	6330	3	17N	17W	1941	3,4,5,5½,6	1,5
Spotted Bear Mountain	13B02	7000	23	25N	15W	1948	1,2,3,4,5	1,2
Strawberry Lake	13A10	5600	11	28N	19W	1948	3,4,5	1
Trinkus Lake	13B01	6100	9	25N	17W	1948	3,4,5	1
Twin Creeks	13B11	3580	24	26N	16W	1951	1,2,3,4,5	1,2
Upper Holland Lake	13B05	7000	28	20N	15W	1948	3,4,5	1
CLARK FORK RIVER								
Black Pine	13C13	7100	26	8N	15W	1959	3,4,5	1,2
Copper Creek	12B10	5700	1	15N	9W	1962	3,4,5	1,2
Cotter Mine	12B11	6250	2	15N	9W	1962	3,4,5	1,2
Coyote Hill	13B10	4200	12	18N	16W	1947	1,2,3,4,5	1,2
El Dorado Mine	13C09	7800	23	8N	12W	1949	3,4	1
Fred Burr Pass	13C11	8000	12	6N	13W	1957	3,4,5	1
Gold Creek Lake	13C10	7200	14	8N	12W	1949	3,4	1
Heart Lake Trail	14C10	4800	11	14N	27W	1965	3,4,5	1,2
Hoodoo Creek	15C01	5900	16	14N	27W	1937	3,4,5	1,2
Intergaard	13C04	6450	6	5N	13W	1936	2,3,4,5	4
Lubrecht Forest No. 3	13C21	5450	19	13N	14W	1951	1,2,3,4,5	8
Lubrecht Forest No. 4	13C22	4650	23	13N	15W	1951	1,2,3,4,5	8
Lubrecht Forest No. 6	13C08	4040	11	13N	15W	1951	1,2,3,4,5	8
Red Lion	13C12	7100	22	6N	13W	1958	3,4,5	1
Skalkaho Summit	13C03	7260	30	6N	17W	1937	3,4,5,5½,6	1
Slide Rock Mountain	13C02	7100	35	10N	16W	1937	3,4,5	1
Southern Cross	13C05	6500	8	5N	13W	1936	2,3,4	4
Spring Gulch	13C18	6000	12	14N	19W	1961	1,2,3,4,5	8
Storm Lake	13C07	7780	19	4N	13W	1939	1,2,3,4,5	1
Stuart Mill	13C06	6500	19	5N	13W	1936	2,3,4	4
Stuart Mountain	13C01	7400	6	14N	18W	1936	1,2,3,4,5, ,6	8
TV Mountain	14B01	6800	33	15N	19W	1956	1,2,3,4,5	8
BITTERROOT RIVER								
Asbrose	13C16	6480	28	9N	18W	1960	3,4,5	1
East Fork R. S.	13D01	5400	16	2N	17W	1937	3,4	1
Gibbons Pass	13D02	7100	4	2S	19W	1934	1,2,3,4,5,5½,6	1,3
Lost Horse	14C07	5940	5	4N	23W	1960	3,4,5	1
Nez Perce Camp	14D02	5680	19	1S	23W	1937	3,4,5	1
Nez Perce Pass	14D01	6570	25	1S	24W	1937	3,4,5	1
Twin Lakes	14C08	6510	32	5N	23W	1960	3,4,5	1
ST. MARY RIVER BASIN								
Iceberg Lake No. 3	13A03	5600	1	35N	17W	1922	5	3,9
Josephine Lower No. 9	13A14	4900	22	35N	16W	1955	5	3,9
Mount Allen No. 7	13A07	5700	27	35N	16W	1922	5	3,9
Piegan Pass No. 6	13A06	5500	27	35N	16W	1922	5	3,9
Pitamigan No. 8	13A08	5800	36	36N	17W	1937	5	3,9

MISSOURI RIVER BASIN

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
BEAVERHEAD RIVER								
Bloody Dick	13D10	7600	12	8S	16W	1948	3,4,5	1
Carter Creek	12D04	7400	22	8S	7W	1963	3,4	1
Elkhorn Springs	13D15	7800	21	4S	12W	1935	3,4,5	3
Gold Stone	13D09	8100	1	8S	16W	1948	3,4,5	1
Lakeview Canyon	11E04	6930	26	14S	2W	1948	3,4,5	10
Lakeview Ridge	11E03	7400	27	14S	2W	1948	3,4,5	10
Lemhi Pass	13E01	7480	9	10S	15W	1948	3,4	1
Trail Creek	13E02	7090	15	10S	15W	1948	3,4	1
White Pine Ridge	12E01	8850	18	14S	9W	1948	3,4,5	1
RUBY RIVER								
Clover Meadow	11D08	8600	28	9S	2W	1963	3,4,5	1
Divide	12E07	7900	14	12S	4W	1963	3,4,5	1
Notch	12E06	8500	18	11S	4W	1963	3,4,5	1
BIG HOLE RIVER								
Abundance Lake	13D20	8800	7	3S	11W	1963	3,4,5	1
Darkhorse Lake	13B19	8600	4	8S	16W	1963	3,4,5	1
Poolhen	13D21	8500	11	1S	13W	1963	3,4,5	1
Jahnke Creek	13D08	7340	25	7S	16W	1948	3,4,5	1
JEFFERSON RIVER								
Berry Meadow	12C07	7300	8	5N	5W	1962	3,4,5	1
Picnic Grounds	12C06	6500	10	5N	6W	1941	2,3,4	4
Pipestone Pass	12D01	7200	10	1N	7W	1938	1,2,3,4,5	1
MADISON RIVER								
Call Road	11D07	8050	21	8S	2W	1962	3,4,5	1
Crockett Lake	11D06	8400	20	8S	2W	1962	3,4,5	1
Hebgen Dam	11E05	6550	22	11S	3E	1934	1,2,3,4,5	3
Jack Creek	11D05	6800	13	6S	1E	1961	3,4	1
North Meadow	11D03	7500	23	3S	3W	1961	3,4	1
West Yellowstone	11E07	6700	34	13S	5E	1934	1,2,3,4,5	3
GALLATIN RIVER								
Arch Falls	10D14	7350	3	5S	6E	1963	2,3,4,5,5½	1
Bear Basin	11D09	8150	9	6S	3E	1963	3,4,5	1
Devil's Slide	10D04	8100	14	5S	6E	1935	2,3,4,5,5½,6	1
Hood Meadow	10D03	6600	22	4S	6E	1935	2,3,4,5,5½	1
Little Park	11D10	7400	22	6S	3E	1963	3,4,5	1
New World	10D01	6700	24	3S	6E	1939	2,3,4	1
Twenty-One Mile	11E06	7150	1	11S	5E	1934	1,2,3,4,5	3
MISSOURI RIVER MAIN STEM								
Boulder Mountain	11C01	7950	1	9N	3E	1963	3,4,5	1
Chessman Reservoir	12C05	6200	2	8N	5W	1936	1,2,3,4,5	3
Elk Peak	10C07	8000	10	8N	8E	1963	3,4,5	1
Grasshopper	10C02	7000	19	9N	8E	1938	3,4,5	1
Kings Hill	10C01	7500	34	13N	8E	1934	3,4,5	3
Rocky Boy	9A01	5200	15	28N	16E	1941	3,4	7
Steeple Pass	12C01	6600	16	13N	7W	1934	3,4,5	3
Ten Mile Lower	12C02	6600	12	8N	6W	1935	1,2,3,4,5	3
Ten Mile Middle	12C03	6800	13	8N	6W	1934	1,2,3,4,5	3
Ten Mile Upper	12C04	8000	19	8N	5W	1935	1,2,3,4,5	3
SUN-TETON-MARIAS RIVERS								
Badger Pass	13A15	6900	4	27N	11W	1964	3,4,5	1
Cabin Creek	12B06	5200	33	23N	10W	1949	3,4,5	1
Five-Bull	12B09	5700	25	20N	10W	1948	3,4,5	1
Freight Creek	12A01	6000	13	26N	10W	1948	3,4,5	1
Goat Mountain	12B07	7000	20	22N	10W	1934	3,4,5	3
Waldron Creek	12B02	5300	16	25N	9W	1948	3,4,5	1
West Fork	12B01	6000	6	25N	9W	1948	3,4,5	1
Wrong Creek	12B04	5700	32	25N	10W	1949	3,4,5	1
Wrong Ridge	12B03	6800	17	25N	10W	1949	3,4,5	1
JUDITH RIVER								
Crystal Lake	9C01	6100	19	12N	18E	1941	3,4	1
Spur Park	10C06	8000	20	12N	9E	1963	3,4,5	1
UPPER YELLOWSTONE RIVER								
Bald Ridge	10C05	7500	11	4N	10E	1961	3,4	1
Camp Sensis	9D01	7890	2	8S	18E	1937	3,4,5	1
Crevice Mountain	10D05	8400	22	9S	9E	1935	3,4	2
Grizzly Peak	9D05	8400	26	7S	19E	1961	1,2,3,4,5	1
Independence	10D06	8000	22	7S	12E	1940	3,4,5	1
Monument Peak	10D12	9000	22	7S	12E	1961	3,4,5	1
Northeast Entrance	10D07	7400	33	9S	14E	1937	1,2,3,4,5	6
Porcupine R. S.	10C03	6500	10	4N	10E	1938	3,4	1
Sacajawea	10D10	6550	36	2N	6E	1960	3,4,5	1
Timberline Creek	9D04	8850	10	8S	18E	1961	3,4,5	1
West Rosebud	9D02	7500	9	7S	16E	1960	3,4	4

SOIL MOISTURE STATIONS

COLUMBIA RIVER BASIN

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
KOOTENAI RIVER								
Baree Trail	15B15M	3800	5	25N	30W	1964	Monthly	2
Murphy Lake R. S.	14A10M	3000	5	34N	25W	1964	Monthly	2
Raven R. S.	15A02M	3050	2	26N	29W	1964	Monthly	2
FLATHEAD RIVER								
Desert Mountain	13A02M	5600	24	31N	19W	1956	Monthly	1
Marias Pass	13A05M	5250	34	30N	14W	1950	Monthly	1
CLARK FORK RIVER								
Georgetown Lake	13C15M	6450	6	5N	13W	1962	Monthly	1
Lubrecht Forest	13C14M	4100	11	13N	15W	1961	Monthly	8
Seeley Lake	13B19M	4030	21	17N	15W	1963	Monthly	2
Skalkaho Summit	13C03M	7260	30	6N	17W	1964	Monthly	1
BITTERROOT RIVER								
Gibbons Pass	13D18M	7100	4	2S	19W	1962	Monthly	1
Lolo Pass	14C05M	5250	11	10N	24W	1963	Monthly	1

MISSOURI RIVER BASIN

Drainage Basin & Course Name	Number	Elev.	Sec.	Twp.	Range	Record Began	Measuring Dates 1/	Meas. By 2/
BEAVERHEAD RIVER								
Lakeview	11E13M	6700	23	14S	2W	1962	Monthly	10
MADISON RIVER								
Red Bluff	11D04M	4800	7	3S	1E	1961	Monthly	7
GALLATIN RIVER								
College Site	11D02M	4856	18	2S	5E	1956	Monthly	1
Twenty-One Mile	11E06M	7150	1	11S	5E	1963	Monthly	6
MISSOURI RIVER MAIN STEM								
Steeple Pass	12C08M	6350	16	13N	7W	1963	Monthly	1
Kings Hill	10C01M	7420	34	13N	8E	1963	Monthly	1
YELLOWSTONE RIVER								
Battle Ridge	10D11M	6020	32	2N	7E	1960	Monthly	1
Northeast Entrance	10D07M	7350	33	9S	14E	1962	Monthly	6
Shields River	10C04M	5850	4	4N	10E	1960	Monthly	1

1/ Numerals 1,2,3,4,5,5½,6 refer to January 1, February 1, March 1, April 1, May 1, May 15 and June 1.

2/ Numerals refer to Agency that secures the snow survey as follows:

1. Soil Conservation Service
2. U. S. Forest Service
3. U. S. Geological Survey
4. Montana Power Company
5. U. S. Indian Service
6. National Park Service
7. Montana Experiment Station
8. Montana State Forestry School
9. Dominion Water & Power Bureau
10. Bureau of Sport Fisheries & Wildlife

M - Soil Moisture

WATER SUPPLY FORECASTS

AS OF APRIL 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	COLUMBIA RIVER BASIN					
	FISHER RIVER					
3020	Jennings (near)	Apr-Sept	328	103		318
		Apr-July	312	103		302
	KOOTENAI RIVER					
3030	Libby (at)	Apr-Sept	8300	102	7802	8096
		Apr-July	7200	103	6745	7010
3050	Leonia (at)	Apr-Sept	9600	103	9037	9327
		Apr-July	8450	103	7842	8179
	NORTH FORK FLATHEAD RIVER					
3555	Columbia Falls (near)	Apr-Sept	2430	120	2232	2027
		Apr-July	2210	120	2044	1844
		Apr-June	1870	120	1746	1565
	MIDDLE FORK FLATHEAD RIVER					
3585	West Glacier (near)	Apr-Sept	2300	120	2440	1923
		Apr-July	2130	120	2260	1785
		Apr-June	1820	120	1929	1521
	SOUTH FORK FLATHEAD RIVER					
3625	Columbia Falls (nr)(17)	Apr-Sept	2900	122	2595	2381
		Apr-July	2760	122	2431	2262
		Apr-June	2430	122	2112	1988
	FLATHEAD RIVER					
3630	Columbia Falls (at)(17)	Apr-Sept	7800	120	7389	6497
		Apr-July	7250	120	6841	6028
		Apr-June	6230	120	5836	5185
3720	Polson (near)(18)	Apr-Sept	9250	119	8553	7778
		Apr-July	8600	119	7854	7229
		Apr-June	7350	119	6629	6188
	SWAN RIVER					
3700	Big Fork (near)	Apr-Sept	840	121	706	694
		Apr-July	740	121	615	614
		Apr-June	610	121	482	503
	BLACKFOOT RIVER					
3400	Bonner (near)	Apr-Sept	1380	133	1105	1036
		Apr-July	1250	133	1004	938
		Apr-June	1080	133	870	812
	FLINT CREEK					
3301	Boulder Creek (below)(13)	Apr-Sept	88.6	121	88.7	73.0
		Apr-July	71.7	121	72.5	59.1
	MIDDLE FORK ROCK CREEK					
3320	Philipsburg (near)	Apr-Sept	100	128	86.9	77.8
		Apr-July	90	128	77.9	70.5

(13) Sum, Flint Creek at Maxville and Boulder Creek at Maxville.
(17) Adjusted for storage in Hungry Horse Reservoir.
(18) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.

*PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY FORECASTS

AS OF APRIL 1, 1970

No.	River and forecast point	Forecast period	Forecast	Average	Adjusted for storage	
					Last year	Average
	COLUMBIA RIVER BASIN					
	FLATHEAD RIVER					
3020	Jocko (near)	Apr-Sept	328	130		252
		Apr-July	312	123		253
	KOOTENAI RIVER					
3030	Libby (at)	Apr-Sept	9200	102	7932	8945
		Apr-July	7900	111	6925	7116
3050	Leonia (at)	Apr-Sept	9400	103	9024	9147
		Apr-July	8450	104	7842	8179
	NORTH FORK FLATHEAD RIVER					
3565	Columbia Falls (near)	Apr-Sept	3430	120	2232	2859
		Apr-July	2270	120	2144	1894
		Apr-Aug	2570	120	1740	1905
	MIDDLE FORK FLATHEAD RIVER					
3585	West Glacier (near)	Apr-Sept	2270	120	2440	1923
		Apr-July	1530	120	1240	1276
		Apr-Aug	1820	120	1025	1232
	SOUTH FORK FLATHEAD RIVER					
3625	Columbia Falls (nr)(17)	Apr-Sept	3000	122	2280	2462
		Apr-July	2190	122	1431	1802
		Apr-Aug	2430	122	1138	1994
	FLATHEAD RIVER					
3630	Columbia Falls (at)(17)	Apr-Sept	4800	120	3980	4407
		Apr-July	3230	120	2641	3022
		Apr-Aug	3820	120	2504	3193
3720	Polson (near)(18)	Apr-Sept	6250	119	5223	5198
		Apr-July	4200	119	3625	4038
		Apr-Aug	4550	119	3429	4380
	SWAN RIVER					
3700	Big Fork (near)	Apr-Sept	810	121	705	664
		Apr-July	740	121	615	608
		Apr-Aug	810	121	645	661
	BLACKFOOT RIVER					
3200	Ovando (near)	Apr-Sept	1180	121	1160	1026
		Apr-July	1450	121	1066	918
		Apr-Aug	1620	121	1130	1212
	PILOT CREEK					
3707	Ovando Creek (below)(19)	Apr-Sept	[illegible]	[illegible]	[illegible]	7190
		Apr-July	[illegible]	121	[illegible]	[illegible]
	MIDDLE FORK ROCK CREEK					
3320	Philipsburg (near)	Apr-Sept	100	122	85.0	[illegible]
		Apr-July	70	122	77.0	[illegible]

(19) Sum, Pilot Creek at Ovando and Snowslide Creek at Maxville.
(17) Adjusted for storage in Hungry Horse Reservoir.
(18) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.

PRELIMINARY DATA PROVIDED BY U.S. WEATHER BUREAU

WATER SUPPLY FORECASTS

AS OF APRIL 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	CLARK FORK RIVER					
3404	Milltown (above)(14)	Apr-Sept	1000	125	1025	802
		Apr-July	880	125	902	705
		Apr-June	760	125	769	605
3405	Missoula (above)	Apr-Sept	2380	130	2130	1838
		Apr-July	2130	130	1906	1642
		Apr-June	1840	130	1639	1417
3530	Missoula (below)	Apr-Sept	4385	129	3861	3391
		Apr-July	3995	129	3483	3088
		Apr-June	3460	129	2935	2670
3545	St. Regis (at)	Apr-Sept	5900	127	5033	4642
		Apr-July	5400	127	4534	4230
		Apr-June	4680	127	3826	3671
3890	Plains (near)(18)	Apr-Sept	15500	121	13905	12793
		Apr-July	14200	121	12618	11736
		Apr-June	12200	121	10581	10077
3920	Whitehorse Rapids (at)(19)	Apr-Sept	17400	121	15512	14398
		Apr-July	15900	121	14045	13187
		Apr-June	13700	121	11801	11318
	WEST FORK BITTERROOT RIVER					
3425	Conner (near)(15)	Apr-Sept	226	126		179
		Apr-July	112	126		168
	BITTERROOT RIVER					
3440	Darby (near)	Apr-Sept	745	128	730	582
		Apr-July	695	128	708	542
		Apr-June	610	128	600	478
3528	Missoula (at)(16)	Apr-Sept	2005	129	1731	1553
		Apr-July	1865	129	1577	1446
		Apr-June	1620	129	1296	1253
	BLODGETT CREEK					
3475	Corvallis (near)	Apr-Sept	57.0	128		44.6
		Apr-July	54.5	128		42.6

(14) Difference in observed flow, Clark Fork above Missoula & Blackfoot at Bonner.
(15) Adjusted for storage in Painted Rocks Reservoir.
(16) Difference in observed flow, Clark Fork above and below Missoula.
(18) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.
(19) Adjusted for storage in Hungry Horse, Flathead Lake and Noxon Rapids Reservoirs.

*PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY FORECASTS

AS OF APRIL 1, 1955

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST (THIS YEAR)	PERCENT AVERAGE	MEASURED FLOW (LAST YEAR*)	PERCENT AVERAGE
	CLARK FORK RIVER					
3404	Milltown (above)(14)	Apr-Sept	1000	124	1029	102
		Apr-July	830	125	902	108
		Apr-June	760	124	769	105
3405	Missoula (above)	Apr-Sept	2370	138	2130	1831
		Apr-July	2130	130	1906	1612
		Apr-June	1840	130	1639	1417
3590	Missoula (below)	Apr-Sept	4385	129	3861	1391
		Apr-July	3995	129	3403	1098
		Apr-June	3400	129	2935	1270
3545	St. Regis (at)	Apr-Sept	5900	127	5015	1042
		Apr-July	5400	127	4534	1230
		Apr-June	4650	127	3826	1071
3890	Plains (near)(18)	Apr-Sept	15500	121	12993	1293
		Apr-July	14200	121	12412	1176
		Apr-June	12200	121	10592	1007
3920	Whitefores Bridge (at)(19)	Apr-Sept	17400	121	15312	1298
		Apr-July	15900	121	14045	1187
		Apr-June	13700	121	11901	1118
	WEST FORK BITTERROOT RIVER					
3425	Conner (near)(15)	Apr-Sept	226	126		179
		Apr-July	172	126		168
	BITTERROOT RIVER					
3440	Darby (near)	Apr-Sept	745	128	730	582
		Apr-July	695	128	708	542
		Apr-June	610	128	600	478
3528	Missoula (at)(16)	Apr-Sept	2005	129	1771	1593
		Apr-July	1865	129	1677	1445
		Apr-June	1620	129	1296	1259
	BLODGETT CREEK					
3475	Corvallis (near)	Apr-Sept	57.0	128		44.5
		Apr-July	54.5	128		42.5

(14) Difference in observed flow, Clark Fork above Missoula & Bitterroot at Conner.
(15) Adjusted for storage in Painted Rocks Reservoir.
(16) Difference in observed flow, Clark Fork above and below Missoula.
(18) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.
(19) Adjusted for storage in Hungry Horse, Flathead Lake and Noxon Rapids Reservoirs.

PROVISIONAL DATA PUBLISHED BY U.S. AGRICULTURAL SURVEY

WATER SUPPLY FORECASTS

AS OF APRIL 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	MISSOURI RIVER BASIN					
	RED ROCK RIVER					
0110	Kennedy Ranch (at)	Apr-Sept	104	145	83.7	71.7
		Apr-July	96	145	76.8	66.2
0125	Monida (near)(1)	Apr-Sept	113	144	110	78.4
		Apr-July	106	144	108	73.7
	BIG HOLE RIVER					
0255	Melrose (near)	Apr-Sept	957	133	849	718
		Apr-July	890	133	785	669
	BOULDER RIVER					
0330	Boulder (near)	Apr-Sept	94.6	124	108	76.3
		Apr-July	90.5	124	103	73.0
	JEFFERSON RIVER					
0345	Sappington (at)	Apr-Sept	1300	133	1294	974
		Apr-July	1160	133	1173	875
	MADISON RIVER					
0375	West Yellowstone (near)	Apr-Sept	247	119	216	208
		Apr-July	187	119	166	157
0385	Grayling (near)(2)	Apr-Sept	509	121	474	420
		Apr-July	399	121	379	330
0410	McAllister (near)(3)	Apr-Sept	890	124	870	718
		Apr-July	713	124	712	576
	GALLATIN RIVER					
0435	Gateway (near)	Apr-Sept	565	126	551	447
		Apr-July	480	126	475	381
	BRIDGER CREEK					
0485	Bozeman (near)	Apr-Sept	25.5	128	23.5	19.9
		Apr-July	23.9	128	21.8	18.7
	HYALITE CREEK					
0500	Bozeman (near)(4)	Apr-Sept	46.2	130	45.8	35.6
		Apr-July	40.0	130	40.1	30.8
	GALLATIN RIVER					
0525	Logan (at)	Apr-Sept	638	137	621	467
		Apr-July	541	137	523	396

(1) Adjusted for storage in Lima Reservoir.
(2) Adjusted for storage in Hebgen Lake.
(3) Adjusted for storage in Hebgen and Ennis Lakes.
(4) Adjusted for storage in Middle Creek Reservoir.

*PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY FORECASTS

AS OF APRIL 1, 1965

No.	Area and Forecast Point	Forecast Period	Forecast Runoff	Percent Average	Reservoir Flow Jan-July	Reservoir Flow Apr-Aug
			thousand acre-feet			
	RED ROCK RIVER					
0110	Kennedy Ranch (est)	Apr-Sept	124	34%	93.7	91.7
		Apr-June	90	34%	75.8	66.5
0125	Montana (near)(1)	Apr-Sept	112	34%	140	134
		Apr-June	100	34%	106	73.7
	BIG HOLE RIVER					
0255	Melrose (near)	Apr-Sept	97.7	33%	449	778
		Apr-July	89.4	33%	778	640
	BOULDER RIVER					
0330	Boulder (near)	Apr-Sept	84.6	32%	209	74.3
		Apr-July	96.5	32%	104	73.0
	JEFFERSON RIVER					
0345	Sappington (est)	Apr-Sept	370	33%	1494	771
		Apr-July	340	33%	1473	572
	MADISON RIVER					
0375	West Yellowstone (near)	Apr-Sept	91.7	31%	434	4.4
		Apr-July	87.7	31%	124	127
0385	Grayling (near)(2)	Apr-Sept	40	31%	64	42
		Apr-July	39	31%	39%	43%
0410	Ennis (near)(3)	Apr-Sept	420	30%	870	745
		Apr-July	71.4	30%	703	570
	GALLATIN RIVER					
0435	Gallatin (near)	Apr-Sept	454	32%	521	497
		Apr-July	380	32%	470	384
	BRIDGER CREEK					
0485	Bozeman (near)	Apr-Sept	28.2	32%	23.3	19.6
		Apr-July	24.9	32%	21.8	17.7
	MILLER CREEK					
0500	Bozeman (near)(4)	Apr-Sept	44.2	33%	45.8	19.4
		Apr-July	40.0	33%	40.0	16.5
	GALLATIN RIVER					
0525	Logan (est)	Apr-Sept	494	33%	1.4	4.7
		Apr-July	441	33%	1.4	1.5

(1) Adjusted for storage in Lima Reservoir.
(2) Adjusted for storage in Hebgen Lake.
(3) Adjusted for storage in Hebgen and Ennis Lakes.
(4) Adjusted for storage in Middle Creek Reservoir.

WATER SUPPLY FORECASTS

AS OF APRIL 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	MISSOURI RIVER					
0545	Toston (at)(3)	Apr-Sept	2850	132	2694	2147
		Apr-July	2460	132	2364	1861
0908	Fort Benton (at)(5)	Apr-Sept	4480	135	4848	3319
		Apr-July	3800	135	4165	2825
1095	Virgelle (at)(6)	Apr-Sept	5400	131	6030	4116
		Apr-July	4670	131	5418	3557
1150	Zortman (near)(6)	Apr-Sept	6000	133	6697	4508
		Apr-July	5150	133	5967	3878
1320	Fort Peck Dam (below)(7)	Apr-Sept	6000	136		4422
		Apr-July	5300	136		3894
1770	Wolf Point (near)(7)	Apr-Sept	6670	136		4879
		Apr-July	5900	136		4317
3300	Williston, N.D.(near)(8)	Apr-Sept	15300	138	13999	11059
		Apr-July	13500	138	12852	9828
	PRICKLY PEAR CREEK					
0615	Clancy (near)	Apr-Sept	26.4	120	35.5	22.0
		Apr-July	23.0	120	30.6	19.2
	SUN RIVER					
0786	Gibson Dam (at)(10)	Apr-Sept	740	121	737	610
		Apr-July	680	121	690	559
	TWO MEDICINE CREEK					
0920	Browning (near)(20)	Apr-Sept	323	123	303	271
		Apr-July	310	123	289	260
	BADGER CREEK					
0925	Browning (near)	Apr-Sept	167	117	190	143
		Apr-July	145	117	172	124
	CUT BANK CREEK					
0990	Cut Bank (at)	Apr-Sept	159	112	141	142
		Apr-July	146	112	131	131
	MARIAS RIVER					
0995	Shelby (near)(9)	Apr-Sept	760	117	814	651
		Apr-July	718	117	777	617
	SOUTH FORK MUSSELSHELL R.					
1185	Martinsdale (above)	Apr-Sept	67.5	138	59.4	48.8
		Apr-July	64.5	138	57.6	46.6
	MILK RIVER					
1350	Eastern Crossing (at)	Apr-Sept	280	112	280	250

(3) Adjusted for storage in Hebgen and Ennis Lakes.
(5) Adjusted for storage in Canyon Ferry Reservoir.
(6) Adjusted for storage in Canyon Ferry and Tiber Reservoirs.
(7) Adjusted for storage in Canyon Ferry, Tiber and Fort Peck Reservoirs.
(8) Adjusted for storage in Canyon Ferry, Tiber, Fort Peck, Buffalo Bill and Boysen Reservoirs.
(9) Adjusted for storage in Two Medicine, Four Horns, Lake Francis & Swift Res.
(10) Adjusted for storage in Gibson Reservoir and diversions.
(20) Adjusted for storage in Two Medicine Reservoir and diversions into Two Medicine Canal.

*PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

WATER SUPPLY FORECASTS

AS OF APRIL 1, 1965

(1000 Acre Feet)

No.	River and Forecast Point	Forecast Period	Forecast This Year	Percent Average	Measured Flow Last Year*	Measured Flow Average*
	MISSOURI RIVER					
0545	Toston (at)(3)	Apr-Sept	2850	132	2694	2147
		Apr-July	2460	132	2364	1861
0908	Fort Benton (at)(5)	Apr-Sept	4480	135	4842	3318
		Apr-July	3800	135	4165	2825
1095	Virgelle (at)(6)	Apr-Sept	5400	137	6030	4116
		Apr-July	4670	131	5432	3557
1150	Zortman (near)(4)	Apr-Sept	6000	133	6607	4508
		Apr-July	5150	133	5907	3878
1320	Fort Peck Dam (below)(7)	Apr-Sept	6000	136		4422
		Apr-July	5300	136		3894
1770	Wolf Point (near)(2)	Apr-Sept	6670	136		4979
		Apr-July	5900	136		4317
3300	Williston, N.D.(near)(8)	Apr-Sept	13300	139	13999	11055
		Apr-July	13500	138	12892	9828
	PRICKLY PEAR CREEK					
0615	Clancy (near)	Apr-Sept	26.4	130	35.5	22.0
		Apr-July	23.0	120	30.6	19.2
	SUN RIVER					
0786	Gibson Dam (at)(10)	Apr-Sept	720	121	727	610
		Apr-July	680	121	690	559
	TWO MEDICINE CREEK					
0920	Browning (near)(20)	Apr-Sept	323	123	303	271
		Apr-July	310	123	289	250
	BADGER CREEK					
0925	Browning (near)	Apr-Sept	167	117	190	143
		Apr-July	145	117	172	124
	CUT BANK CREEK					
0990	Cut Bank (at)	Apr-Sept	139	112	141	142
		Apr-July	126	112	123	121
	MARIAS RIVER					
0995	Shelby (near)(9)	Apr-Sept	760	117	814	651
		Apr-July	718	117	777	617
	SOUTH FORK MISSELSHELL R.					
1185	Martinsdale (above)	Apr-Sept	67.5	138	59.4	48.8
		Apr-July	64.5	138	57.5	46.6
	MILK RIVER					
1350	Eastern Crossing (at)	Apr-Sept	230	112	280	250

(3) Adjusted for storage in Hebgen and Zenia Lakes.
(5) Adjusted for storage in Canyon Ferry Reservoir.
(6) Adjusted for storage in Canyon Ferry and Tiber Reservoirs.
(7) Adjusted for storage in Canyon Ferry, Tiber and Fort Peck Reservoirs.
(8) Adjusted for storage in Canyon Ferry, Tiber, Fort Peck, Buffalo Bill and Boysen Reservoirs.
(9) Adjusted for storage in Two Medicine, Four Horns, Lake Francis & Swift Res.
(10) Adjusted for storage in Gibson Reservoir and diversions.
(20) Adjusted for storage in Two Medicine Reservoir and diversions into Two Medicine Canal.

PROVISIONAL DATA PUBLISHED BY U.S. GEOLOGICAL SURVEY

WATER SUPPLY FORECASTS

AS OF APRIL 1, 1965

(1000 Acre Feet)

NO.	RIVER AND FORECAST POINT	FORECAST PERIOD	FORECAST THIS YEAR	PERCENT AVERAGE	MEASURED FLOW LAST YEAR*	MEASURED FLOW AVERAGE
	YELLOWSTONE RIVER					
1915	Corwin Springs (at)	Apr-Sept	2275	121	2128	1877
		Apr-July	1905	121	1765	1572
1925	Livingston (near)	Apr-Sept	2600	122	2392	2127
		Apr-July	2170	122	1972	1770
2145	Billings (at)	Apr-Sept	5020	128	4445	3913
		Apr-July	4330	128	3856	3362
3090	Miles City (at)(12)	Apr-Sept	7830	135		5778
		Apr-July	6880	135		5080
3295	Sidney (near)(12)	Apr-Sept	8100	138		5850
		Apr-July	7200	138		5230
	SHIELDS RIVER					
1935	Clyde Park (at)	Apr-Sept	144	145	133	99.0
		Apr-July	134	145	121	92.2
	BOULDER RIVER					
2000	Big Timber (at)	Apr-Sept	460	134	375	343
		Apr-July	430	134	351	321
	STILLWATER RIVER					
2050	Absarokee (near)(11)	Apr-Sept	745	135	553	552
		Apr-July	626	135	486	465
	CLARKS FORK RIVER					
2075	Chance (at)	Apr-Sept	690	118	602	583
		Apr-July	622	118	561	528
2085	Edgar (at)	Apr-Sept	725	119	651	609
		Apr-July	642	119	603	538
	ROCK CREEK					
2095	Red Lodge (near)	Apr-Sept	132	128	96.7	103
		Apr-July	102	128	78.7	79.6

(11) Adjusted for storage in Mystic Lake.
(12) Adjusted for storage in Buffalo Bill and Boysen Reservoirs.

*PROVISIONAL DATA FURNISHED BY U.S. GEOLOGICAL SURVEY

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD).

No.	River and forecast point	Forecast period	Forecast this year	Forecast average	Measured flow last year*	Measured flow average
	YELLOWSTONE RIVER					
1915	Corwin Springs (at)	Apr-Sept	2275	121	2124	1877
		Apr-July	1905	121	1765	1572
1925	Livingston (near)	Apr-Sept	2800	122	2392	2127
		Apr-July	2170	122	1972	1770
2145	Billings (at)	Apr-Sept	5020	128	4445	3913
		Apr-July	4330	128	3955	3482
3090	Miles City (at)(12)	Apr-Sept	7930	135		5774
		Apr-July	6880	135		5080
3295	Sidney (near)(12)	Apr-Sept	8100	132		5850
		Apr-July	7200	129		5230
	SNAKE RIVER					
1925	Clyde Park (at)	Apr-Sept	144	145	133	99.0
		Apr-July	134	145	121	92.2
	BOULDER RIVER					
2000	Big Timber (at)	Apr-Sept	460	134	375	343
		Apr-July	430	134	351	321
	STILLWATER RIVER					
2050	Absarokee (near)(11)	Apr-Sept	745	135	583	552
		Apr-July	620	135	486	465
	CLARKS FORK RIVER					
2075	Clance (at)	Apr-Sept	690	118	602	593
		Apr-July	622	118	521	528
2085	Edgar (at)	Apr-Sept	725	119	631	603
		Apr-July	642	119	603	538
	ROCK CREEK					
2095	Red Lodge (near)	Apr-Sept	132	129	96.7	103
		Apr-July	102	128	78.7	79.6

(11) Adjusted for storage in Cooke Lake.
(12) Adjusted for storage in Buffalo Bill and Heyden Reservoirs.

*Provisional data furnished by U.S. Geological Survey

SNOW SURVEY DATA

AS OF APRIL 1, 1965

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
	COLUMBIA RIVER BASIN						
KOOTENAI RIVER							
15B11	Baree Creek	5500	4/1	115	48.1	56.3	50.5
15B15	Baree Trail	3800	4/1	29	10.6	-	-
14A04	Brush Creek	5000	3/30	43	13.7	13.4	14.3*
BC 10	Fernie	3500	4/1	33	13.1	9.3	9.5
BC 12A	Field	4200	3/28	25	8.1	3.1	5.4
BC 11	Glacier	4100	4/2	66	25.8	27.9	27.6
14A11	Graves Creek	4300	3/31	61	21.8	-	-
BC 43	Gray Creek	5100	4/1	57	19.9	18.6	19.7
BC 33	Kicking Horse	5400	3/28	52	15.8	13.4	14.8
BC 20B	Kimberley	3800	3/31	28	10.6	7.7	7.7
BC 32	Marble Canyon	5000	3/29	52	15.2	11.9	13.8
BC 10B	Morrissey Ridge	6100				-	-
BC 10A	New Fernie	4100	4/1	51	20.1	16.3	15.4*
15A01	Red Mountain	6000	4/1	58	22.1	18.0	21.4
BC 8A	Sinclair Pass	4500	3/29	20	4.6	4.0	5.4
BC 20A	Sullivan Mine	5100	3/30	49	15.6	11.9	15.6
BC 41	Upper Elk River	4400	3/28	31	9.7	6.4	8.2
14A07	Weasel Divide	5450	3/31	98	40.0	36.8	34.1
FLATHEAD RIVER							
14B03	Bassoo Peak	5150	3/29	44	12.6	11.6	13.4*
13A11	Beaver Lake	5900	3/30	79	30.9	22.8	-
13B03	Big Creek	6750	4/1	121	51.6	47.4	46.4
13A17	Camp Misery	6400	3/30	140	61.0	51.1	-
13A02	Desert Mountain	5600	3/29	57	21.9	17.2	16.9
13B04	Fatty Creek	5500	4/1	69	25.6	26.6	-
14A09	Griffin Creek Divide	5150	3/31	41	13.2	11.8	14.3*
13B12	Gunsight Lake	6300	3/30	118	50.9	41.0	-
14A03	Hell Roaring Divide	5770	3/31	95	39.5	35.8	32.3
13B13	Holbrook	4530	3/30	40	14.5	13.8	10.4*
14A06	Kishenehn	3890	3/30	36	12.0	10.6	10.4
14A05	Logan Creek	4300	3/30	31	9.5	8.2	9.5
13A05	Marias Pass	5250	3/30	76	26.8	16.4	20.1
13A16	Mineral Creek	4000	3/30	76	26.6	22.8	22.9
13B07	North Fork Jocko	6330	4/2	129	55.0	53.3	46.7
13B02	Spotted Bear Mountain	7000	3/30	53	19.9	17.3	15.5
13A10	Strawberry Lake	5600	3/31	129	54.6	44.8	44.7
13B01	Trinkus Lake	6500	3/31	129	54.2	46.3	44.2*
13B11	Twin Creeks	3580	3/31	35	15.9	16.0	12.1*
13B05	Upper Holland Lake	7000	3/31	108	45.0	39.0	36.3*

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF APRIL 1, 1965

SNOW COURSE			CURRENT DATA			PAST RECORD	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT LAST YEAR	WATER CONTENT AVERAGE
	COLUMBIA RIVER BASIN						
	KOOTENAY RIVER						
1SB11	Bares Creek	5900	4/1	115	48.1	56.3	50.5
1SB15	Bares Trail	3800	4/1	29	10.6	-	-
1A20A	Brush Creek	5000	3/30	43	13.7	12.4	14.2*
BC 10	Fernie	3600	4/1	33	13.1	9.3	9.5
BC 12A	Field	4200	3/28	29	8.1	3.1	5.4
BC 11	Glacier	4100	4/2	66	25.8	27.9	27.8
1A11	Graves Creek	4300	3/31	61	21.8	-	-
BC 43	Gray Creek	5100	4/1	57	19.9	18.6	19.7
BC 33	Kicking Horse	5400	3/28	52	15.8	13.4	14.8
BC 20B	Kimberley	3800	3/31	28	10.6	7.7	7.7
BC 32	Marble Canyon	5000	3/29	52	15.2	11.9	13.8
BC 10B	Morrissey Ridge	6100			-	-	-
BC 10A	New Fernie	4100	4/1	51	20.1	16.3	15.4*
1SA01	Red Mountain	6000	4/1	58	22.1	18.0	21.4
BC 8A	Sinclair Pass	4500	3/29	20	4.6	4.0	5.4
BC 20A	Sullivan Mine	5100	3/30	49	15.6	11.9	15.6
BC 41	Upper Elk River	4400	3/28	31	9.7	6.4	8.2
1A07	Wessel Divide	5450	3/31	98	40.0	36.8	34.1
	FLATHEAD RIVER						
1A03	Bacon Peak	5150	3/29	44	12.6	11.6	12.4*
1A11	Beaver Lake	5900	3/30	79	30.9	28.3	-
1B03	Big Creek	6750	4/1	121	51.6	47.4	46.4
1A17	Camp Misery	6400	3/30	140	61.0	51.1	-
1A02	Desert Mountain	5600	3/29	57	21.9	17.2	16.9
1B04	Fatty Creek	5500	4/1	69	25.6	26.6	-
1A09	Griffin Creek Divide	5150	3/31	41	13.2	11.8	14.3*
1B12	Gunsight Lake	6500	3/30	118	50.9	41.0	-
1A07	Hell Roaring Divide	5770	3/31	94	39.5	35.8	32.3
1B13	Holbrook	4530	3/30	40	14.5	13.8	10.4*
1A06	Kishenehn	3950	3/30	36	12.0	10.7	10.4
1A05	Logan Creek	4300	3/30	31	9.5	8.2	9.5
1A05	Marias Pass	5250	3/30	76	26.8	16.4	20.1
1A16	Mineral Creek	4000	3/30	76	26.6	22.8	22.9
1B07	North Fork Jocko	6330	4/2	129	55.0	53.3	46.7
1B02	Spotted Bear Mountain	7000	3/30	52	19.9	17.3	15.5
1A10	Strawberry Lake	5600	3/31	129	54.6	44.8	44.7
1B01	Swinging Lake	6500	3/31	129	54.2	46.3	44.2*
1B11	Twin Creeks	3540	3/31	35	12.9	16.0	12.1*
1B05	Upper Holland Lake	7000	3/31	108	45.0	39.0	36.3*

NOTE: ALL AVERAGES BASED ON 1948-1964 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF APRIL 1, 1965

(inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
CLARK FORK RIVER							
13C13	Black Pine	7100	4/1	53	19.4	16.0	14.6*
12B10	Copper Creek	5700	3/29	54	18.8	15.6	-
12B11	Cotter Mine	6250	3/29	62	22.6	17.6	-
13B10	Coyote Hill	4200	4/2	39	13.8	10.8	11.0
13C09	El Dorado Mine	7800	3/30	78	30.2	22.2	22.6*
13C11	Fred Burr Pass	8000	4/2	87	36.2	27.2	29.0*
13C10	Gold Creek Lake	7200	3/30	62	22.3	18.1	17.0*
14C10	Heart Lake Trail	4800	4/1	66	24.9	-	-
15C01	Hoodoo Creek	6200	4/1	130	55.6	49.8	53.4
13C04	Intergaard	6450	4/1	34	10.7	9.5	8.5*
15B02	Lookout	5250	3/29	108	41.0	41.6	40.5
13C21	Lubrecht Forest No. 3	5450	3/27	41	10.2	8.5	8.2*
13C22	Lubrecht Forest No. 4	4650	3/27	17	4.6	5.6	3.5*
13C08	Lubrecht Forest No. 6	4040	3/27	22	6.5	6.0	3.5*
13C12	Red Lion	7100	4/2	65	24.1	17.2	17.5*
13C03	Skalkaho Summit	7260	4/1	86	35.7	26.4	27.4
13C02	Slide Rock Mountain	7100	3/31	59	20.8	16.4	16.0
13C05	Southern Cross	6500	4/1	29	9.1	8.0	7.0*
13C18	Spring Gulch	6000	3/27	54	17.2	15.9	12.5*
13C07	Storm Lake	7780	4/2	57	20.0	14.6	15.5
13C06	Stuart Mill	6500	4/1	29	8.2	7.6	7.5*
13C01	Stuart Mountain	7400	3/27	96	37.4	34.4	32.6
14B01	TV Mountain	6800	3/28	69	23.2	19.6	18.7*
BITTERROOT RIVER							
13C16	Ambrose	6480	3/31	52	17.6	14.4	14.3*
13D01	East Fork R. S.	5400	4/2	27	8.4	8.6	7.7
13D02	Gibbons Pass	7100	3/28	85	30.5	23.3	25.0
14D03	Kit Carson	5020	3/29	41	12.6	12.4	9.0
14C05	Lolo Pass	5230	3/26	100	37.9	36.6	36.4*
14C07	Lost Horse	5940	3/30	100	38.4	39.6	35.6*
13D16	Moose Creek	6200	3/27	67	24.6	20.5	17.1
14D02	Nez Perce Camp	5580	3/29	64	20.3	19.9	15.8
14D01	Nez Perce Pass	6570	3/29	66	23.3	21.0	18.3
13D22	Saddle Mountain	7940	4/2	83	32.6	-	-
14C04	Savage Pass	6600	3/25	85	32.1	31.6	30.5*
14C08	Twin Lakes	6510	3/30	128	54.6	47.6	46.7*

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF APRIL 1, 1965

SNOW COURSE			CURRENT DATA			PAST RECORD	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
						LAST YEAR	AVERAGE
CLEAR FORK RIVER							
12C13	Black Pine	7100	4/-	53	19.4	16.0	14.6*
12B10	Copper Creek	5700	3/29	32	18.8	15.6	-
12B11	Cotter Mine	6500	3/29	62	22.6	17.6	-
12B10	Coyote Hill	6200	4/2	30	15.8	10.8	11.0
12C09	El Dorado Mine	7800	3/30	78	30.2	22.2	22.6*
12D11	Fred Burr Pass	9000	4/2	87	36.2	27.2	29.0*
12C10	Gold Creek Lake	7200	3/30	62	22.3	18.1	17.0*
12D10	Heart Lake Trail	4800	4/1	66	24.9	-	-
12C01	Hogback Creek	6700	4/1	130	55.6	49.8	55.4
12C04	Interpaved	6450	4/1	34	10.7	9.6	8.5*
12B02	Lookout	5250	3/29	108	41.0	41.6	40.5
12C21	Lubrecht Forest No. 3	5450	3/27	41	10.2	8.5	8.2*
12C22	Lubrecht Forest No. 4	4950	3/27	17	4.6	5.6	3.5*
12C08	Lubrecht Forest No. 5	4040	3/27	22	6.5	6.0	3.5*
12C12	Red Lion	7100	4/2	65	24.1	17.2	17.5*
12C03	Skalkaho Summit	7560	4/1	86	35.7	26.4	27.4
12C02	Slide Rock Mountain	7100	3/31	59	20.8	16.4	16.0
12C05	Southern Cross	5500	4/1	29	9.1	8.0	7.0*
12C18	Spring Gulch	6000	3/27	54	17.2	15.9	12.5*
12C07	Storm Lake	7730	4/2	47	20.0	14.6	15.5
12C06	Stuart Mill	6500	4/1	29	8.2	7.6	7.4*
12C01	Stuart Mountain	7400	3/27	95	37.4	34.4	32.6
12B01	TV Mountain	6800	3/28	69	23.2	19.6	18.7*
BITTERROOT RIVER							
12D16	Ambrose	6180	3/31	52	17.6	14.4	14.3*
12D01	East Fork R. S.	5400	4/2	27	8.4	8.6	7.7
12D02	Gibbons Pass	7100	3/28	85	30.5	23.3	25.0
12D03	Kit Carson	5020	3/29	41	12.6	12.4	9.0
12C05	Lolo Pass	5230	3/26	100	37.9	36.5	36.4*
12C07	Lost Horse	5910	3/30	100	32.4	39.6	35.6*
12D16	Moose Creek	5400	3/27	67	24.5	20.5	17.1
12D02	Nez Perce Camp	4580	3/29	64	20.3	19.9	14.8
12D01	Nez Perce Pass	6570	3/29	66	23.3	21.0	18.3
12D22	Saddle Mountain	7040	4/2	83	32.6	-	-
12C04	Savage Pass	5600	3/28	85	32.1	31.6	30.5*
12C08	Twin Lakes	5510	3/30	128	54.6	47.6	46.7*

NOTE: ALL AVERAGES BASED ON 1948-1952 15 YEAR PERIOD. *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF APRIL 1, 1965

(inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
						WATER CONTENT	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE
	MISSOURI RIVER BASIN						
BEAVERHEAD RIVER							
13D10	Bloody Dick	7600	3/30	50	16.6	10.6	11.7
11E11	Blue Ledge Mine	6700	3/28	49	18.0	14.5	16.7
12E03	Camp Creek	6800	3/29	38	12.7	9.1	10.4
12D04	Carter Creek	7400	3/28	34	7.4	4.9	-
13E22	Dad Creek Lake	8400	3/23	61	20.4	-	-
13D15	Elk Horn Springs	7800	3/29	49	15.2	8.3	10.4
13D09	Gold Stone	8100	3/30	62	21.2	14.7	15.3
11E12	Kilgore	6200	3/28	33	10.9	11.0	10.0
11E04	Lakeview Canyon	6930	3/30	54	19.4	9.3	10.8
11E03	Lakeview Ridge	7400	3/30	48	17.0	8.6	9.7
13E01	Lemhi Pass	7480	3/29	49	15.3	9.0	9.2
13E02	Trail Creek	7090	3/29	46	14.2	8.4	8.8
12E01	White Pine Ridge	8850	3/30	30	6.7	6.8	5.9
RUBY RIVER							
11D08	Clover Meadow	8600	3/30	62	22.4	16.8	-
12E07	Divide	7900	3/30	49	15.7	10.4	-
12E06	Notch	8500	3/30	53	17.7	13.8	-
BIG HOLE RIVER							
13D20	Abundance Lake	8800	3/30	75	26.7	20.6	-
13D19	Darkhorse Lake	8600	3/30	89	36.4	26.4	-
13D21	Foolhen	8280	3/30	67	23.1	17.5	-
13D08	Jahnke Creek	7340	3/30	43	13.2	8.6	11.2
JEFFERSON RIVER							
12C07	Berry Meadow	7300	4/2	35	9.5	7.4	-
12C06	Picnic Grounds	6500	4/1	20	5.2	5.1	4.8*
12D01	Pipestone Pass	7200	4/1	24	6.2	4.0	6.2

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF APRIL 1, 1965

SNOW COURSE			CURRENT DATA			PAST RECORD		
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	LAST YEAR	AVERAGE
MISSOURI RIVER BASIN								
BEAVERHEAD RIVER								
12D10	Bloody Dick	7600	3/30	90	16.6	10.6	11.7	
12E11	Blue Ledge Mine	6700	3/28	49	18.0	14.5	16.7	
12E02	Camp Creek	6800	3/29	38	12.7	9.1	10.4	
12D04	Carter Creek	7400	3/28	34	7.4	4.9	-	
12E22	Red Creek Lake	8400	3/29	61	20.4	-	-	
12D15	Elk Horn Springs	7800	3/29	49	15.2	8.3	10.4	
12D09	Gold Stone	8100	3/30	62	21.2	14.7	15.3	
12E12	Kilgore	6200	3/28	33	10.9	11.0	10.0	
11E04	Lakeview Canyon	6930	3/30	34	19.4	9.3	10.8	
11E03	Lakeview Ridge	7400	3/30	48	17.0	8.6	9.7	
12E01	Lemhi Pass	7480	3/29	49	15.3	9.0	9.2	
12E02	Trail Creek	7090	3/29	46	14.2	8.4	8.8	
12E01	White Pine Ridge	8850	3/30	30	6.7	6.8	5.9	
RUBY RIVER								
11D08	Clover Meadow	8500	3/30	62	22.4	16.8	-	
12E07	Divide	7900	3/30	49	15.7	10.4	-	
12E06	Notch	8500	3/30	53	17.7	13.8	-	
BIG HOLE RIVER								
12E20	Abundance Lake	8800	3/30	75	26.7	20.6	-	
12D19	Darkhorse Lake	8600	3/30	89	36.4	26.4	-	
12E21	Foolhen	8280	3/30	67	23.1	17.5	-	
12D08	Jackie Creek	7340	3/30	43	13.2	8.6	11.2	
JEFFERSON RIVER								
12C07	Berry Meadow	7900	4/2	35	9.5	7.4	-	
12C06	Black Grouse	6500	4/1	20	5.2	5.1	4.8*	
12D01	Ringstone Pass	7200	4/1	24	6.2	4.0	6.2	

NOTE: ALL AVERAGES BASED ON 1956-1962 (10 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF APRIL 1, 1965

(Inches)

SNOW COURSE NO.	SNOW COURSE NAME	ELEVATION	CURRENT DATA: DATE OF SURVEY	CURRENT DATA: SNOW DEPTH	CURRENT DATA: WATER CONTENT	PAST RECORD: WATER CONTENT: LAST YEAR	PAST RECORD: WATER CONTENT: AVERAGE
MADISON RIVER							
11E09	Big Springs	6500	3/29	68	26.3	21.8	22.6
11D07	Call Road	8050	3/30	47	13.9	12.7	-
11D06	Crockett Lake	8400	3/30	46	13.8	12.2	-
11D12	Four Mile	6900	3/31	38	11.2	-	-
11E05	Hebgen Dam	6550	3/28	48	15.2	13.6	12.2
11E10	Island Park	6315	3/29	55	20.8	15.9	17.6
11D05	Jack Creek	7500	4/1	22	7.0	4.3	-
11D11	Lower Twin	7900	3/31	75	28.8	-	-
10E02	Norris Basin	7500	3/28	50	14.6	11.1	9.9*
11D03	North Meadow	7500	3/31	45	13.7	6.4	-
11E21	Potomageton Park	7150	4/2	52	18.5	-	-
11E20	Sentinel Creek	8300	4/2	81	30.9	-	-
11E08	Valley View	6500	3/29	65	25.9	19.4	16.4
11E07	West Yellowstone	6700	3/29	48	14.8	11.0	11.7
GALLATIN RIVER							
10D14	Arch Falls	7350	3/26	52	16.0	14.2	-
11D09	Bear Basin	8150	3/25	71	25.8	22.6	-
10D15	Bridger Bowl	7250	4/1	79	33.0	-	-
10D04	Devil's Slide	8100	3/26	83	29.8	25.6	22.3
10D03	Hood Meadow	6600	3/26	46	13.5	12.6	10.0
11D10	Little Park	7400	3/25	58	19.9	17.6	-
10D01	New World	6700	3/25	47	13.8	14.6	10.8
11E06	Twenty-One Mile	7150	3/28	73	27.2	18.5	18.2
MISSOURI RIVER (Main Stem)							
11C01	Boulder Mountain	7950	3/29	65	20.8	21.2	-
12C05	Chessman Reservoir	6200	3/30	25	6.1	7.4	4.9
10C07	Elk Peak	8000	3/30	65	23.0	19.4	-
10C02	Grasshopper	7000	3/30	28	6.7	8.4	5.7
10C01	Kings Hill	7500	3/30	56	17.0	16.7	13.6
9A01	Rocky Boy	5200	3/31	26	7.1	6.3	4.3
12C01	Stemple Pass	6600	4/1	45	13.8	12.9	11.0
12C02	Ten Mile Lower	6600	3/30	40	10.5	8.0	7.2
12C03	Ten Mile Middle	6800	3/31	49	15.1	12.5	11.2
12C04	Ten Mile Upper	8000	3/31	60	20.6	16.7	14.3
SUN-TETON-MARIAS RIVERS							
13A15	Badger Pass	6900	3/30	107	44.5	39.6	-
12B06	Cabin Creek	5200	3/30	37	12.4	8.9	7.0*
12B09	Five-Bull	5700	3/30	35	10.0	5.8	7.1*

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF APRIL 1, 1965

SNOW COURSE			CURRENT DATA			PAST RECORD	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT	
						LAST YEAR	AVERAGE
MADISON RIVER							
11E09	Big Springs	6500	3/29	68	26.3	21.8	22.6
11D07	Cali Road	8050	3/30	47	13.9	12.7	-
11D06	Cronkett Lake	8400	3/30	48	13.8	12.2	-
11D12	Four Mile	6900	3/31	35	11.2	-	-
11E05	Robben Dam	6550	3/28	46	15.2	13.6	12.2
11E10	Island Park	6315	3/29	95	20.8	15.9	17.6
11D05	Jack Creek	7500	4/1	22	7.0	4.3	-
11D11	Lower Twin	7800	3/31	75	28.8	-	-
10E02	Morris Ranch	7500	3/28	50	14.6	11.1	9.9*
11D03	North Meadow	7500	3/31	45	13.7	6.4	-
11E21	Potosi-Pete Park	7150	4/2	52	18.5	-	-
11E20	Sentinel Creek	8300	4/2	81	30.9	-	-
11E08	Valley View	6500	3/29	65	25.9	19.4	16.4
11E07	West Yellowstone	6700	3/29	46	14.8	11.0	11.7
GALLATIN RIVER							
10D14	Arch Falls	7350	3/26	52	16.0	14.2	-
11D09	Bear Basin	8150	3/25	71	25.8	22.6	-
10D18	Bridger Bowl	7250	4/1	79	33.0	-	-
10D04	Devil's Slide	8100	3/26	83	29.8	25.6	32.3
10D03	Hood Meadow	6600	3/25	46	13.5	12.6	10.0
11D10	Little Park	7400	3/25	58	19.9	17.6	-
10D01	New World	6700	3/25	47	13.8	14.6	10.8
11E06	Twenty-One Mile	7150	3/28	73	27.2	18.5	18.2
MISSOURI RIVER (Main Stem)							
11C01	Boulder Mountain	7950	3/29	65	20.8	21.2	-
12C05	Chessman Reservoir	6200	3/30	25	6.1	7.4	4.9
10C07	Elk Park	8000	3/30	65	23.0	19.4	-
10C02	Grasshopper	7000	3/30	28	6.7	8.4	5.7
10C01	Kings Hill	7200	3/30	56	17.0	16.7	13.6
9A01	Rocky Boy	5200	3/31	26	7.1	6.3	4.3
12C01	Stemple Pass	6600	4/1	45	13.8	12.9	11.0
12C02	Ten Mile Lower	6600	3/30	40	10.5	8.0	7.2
12C03	Ten Mile Middle	6800	3/31	49	15.1	12.5	11.2
12C04	Ten Mile Upper	8000	3/31	60	20.6	16.7	14.3
SUN-TETON-MARIAS RIVERS							
13A15	Badger Pass	6900	3/30	107	44.5	39.6	-
12B06	Cable Creek	5200	3/30	37	12.4	8.9	7.0*
12B09	Five-Mile	5700	3/30	35	10.0	5.8	7.1*

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW SURVEY DATA

AS OF APRIL 1, 1965

(Inches)

SNOW COURSE			CURRENT DATA			PAST RECORD	
NO.	NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH	WATER CONTENT	WATER CONTENT LAST YEAR	WATER CONTENT AVERAGE
SUN-TETON-MARIAS RIVERS (cont'd)							
12A01	Freight Creek	6000	3/29	65	24.2	15.2	17.0
12B07	Goat Mountain	7000	3/31	51	16.2	11.5	12.3
12B01	West Fork	6000	3/29	64	24.4	14.2	16.9*
12B04	Wrong Creek	5700	3/30	59	21.8	16.8	15.8*
12B03	Wrong Ridge	6800	3/30	72	29.1	22.0	22.2*
JUDITH RIVER							
9C01	Crystal Lake	6100	4/1	50	16.1	17.7	12.2
10C06	Spur Park	8000	3/31	74	27.5	25.4	-
SASKATCHEWAN (BOW) RIVER							
ALB. 1	Bow River	5100	3/30	41	11.2	5.4	9.2
ALB. 2	North Course	5400	3/29	39	10.2	6.0	9.1
ALB. 5	Lake Louise	5800	3/30	43	13.3	7.4	10.9
ALB. 6	Mirror Lake	6600	3/30	49	14.9	7.6	13.1
ALB. 8	Misc. Lake Louise	5700	3/30	49	12.7	7.0	11.7
ALB. 10	Mount Eisenhower	5000	3/29	26	5.9	2.8	-
UPPER YELLOWSTONE RIVER							
10C05	Bald Ridge	7500	3/26	52	16.6	14.8	11.7*
9D01	Camp Senia	7890	4/2	32	9.6	6.6	6.3
10E03	Canyon	7750	3/31	61	23.4	16.1	16.3
10D05	Crevice Mountain	8400	4/1	42	11.7	10.6	9.5
10E06	East Entrance	7000	3/25	38	10.1	11.6	11.3*
9D05	Grizzly Peak	8400	4/1	63	20.6	12.7	-
10D06	Independence	8000	3/26	70	24.3	18.0	19.2*
10E04	Lake Camp	7850	3/31	48	15.0	9.1	11.1
9E01	Lodgepole	8200	4/2	43	12.1	11.8	11.8*
10E01	Lupine Creek	7300	3/27	50	13.6	8.7	11.2
10D12	Monument Peak	9000	3/26	91	34.2	24.6	23.0*
10D07	Northeast Entrance	7400	3/28	47	13.5	9.6	9.3
10C03	Porcupine R. S.	6500	3/26	38	10.4	10.5	7.7
10D10	Sacajawea	6550	3/25	55	18.4	15.0	13.0*
10C08	South Fork Shields	8100	3/26	80	30.5	-	-
10E05	Sylvan Pass	7100	3/25	54	16.3	14.7	14.9
10E07	Thumb Divide	7900	3/29	87	32.1	19.0	24.2
9D04	Timberline Creek	8850	4/2	63	21.6	15.8	14.1*

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SNOW COURSE			CURRENT DATA			PAST RECORD		
NO.	NAME	ELEVATION	DATE OF SURVEY	DEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT		
						LAST YEAR	AVERAGE	
SUN-TETON-MARIAS RIVERS (cont'd)								
12A01	Freight Creek	6000	3/29	65	24.2	15.2	17.0	
12B07	Dead Mountain	7000	3/31	51	16.2	11.5	12.3	
12B01	West Fork	6000	3/29	64	24.4	14.2	16.9*	
12B04	Wrong Creek	5700	3/30	59	21.8	16.8	15.8*	
12B03	Wrong Ridge	6800	3/30	72	29.1	22.0	22.2*	
JUDITH RIVER								
9J01	Crystal Lake	6100	4/1	59	16.1	17.7	12.2	
10C06	Sport Park	8000	3/31	74	27.5	25.4	-	
SASKATCHEWAN (FORK) RIVER								
AlB. 1	Bow River	5100	3/30	41	11.2	5.4	9.2	
AlB. 2	North Course	5400	3/29	39	10.2	6.0	9.1	
AlB. 5	Lake Louise	5800	3/30	43	13.3	7.4	10.5	
AlB. 6	Mirror Lake	6600	3/30	49	14.9	7.6	13.1	
AlB. 8	Moro. Lake Louise	5700	3/30	49	12.7	7.0	11.7	
AlB. 10	Mount Eisenhower	5900	3/29	26	5.9	2.8	-	
UPPER YELLOWSTONE RIVER								
10C05	Bald Ridge	7500	3/26	52	16.6	14.8	11.7*	
9D01	Camp Senia	7890	4/2	32	9.6	6.0	6.3	
10E03	Canyon	7750	3/31	61	23.4	16.1	16.3	
10D05	Crevice Mountain	8400	4/1	42	11.7	10.6	9.5	
10E06	East Entrance	7000	3/25	38	10.1	11.6	11.3*	
9D05	Grizzly Peak	8400	4/1	63	20.6	12.7	-	
10D06	Independence	8000	3/26	70	24.3	18.0	19.2*	
10C04	Lake Camp	7950	3/31	48	15.0	9.1	11.1	
9E01	Lodgepole	8200	4/2	43	12.1	11.8	11.8*	
10E01	Lupine Creek	7300	3/27	50	13.6	8.7	11.2	
10D12	Monument Peak	9000	3/26	91	34.2	24.6	25.0*	
10D07	Northeast Entrance	7400	3/28	47	13.5	9.6	9.3	
10E03	Porcupine R. S.	6500	3/26	38	10.4	10.5	7.7	
10D10	Sacajawea	6550	3/25	55	18.4	15.0	13.0*	
10C08	South Fork Snake	8100	3/26	80	30.5	-	-	
10E05	Sylvan Pass	7100	3/25	54	16.3	14.7	14.9	
10E07	Thumb Divide	7900	3/29	87	32.1	19.0	24.2	
9D04	Timberline Creek	8550	4/2	63	21.6	15.8	14.1*	

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). *ADJUSTED AVERAGE

SOIL MOISTURE DATA

AS OF APRIL 1, 1965

(Inches)

SOIL MOISTURE STATION			SOIL PROFILE		CURRENT DATA		PAST RECORD	
NO.	NAME	ELEVATION	DEPTH	FIELD CAPACITY	DATE OF SURVEY	SOIL MOISTURE	LAST YEAR	**AVERAGE
			COLUMBIA RIVER BASIN					
Kootenai								
15B15M	Baree Trail	3800	48	7.5	4/1	6.2	-	-
14A10M	Murphy Lake R. S.	3000	48	22.6	4/2	22.3	-	-
15A02M	Raven R. S.	3050	48	23.0	4/1	21.0	-	-
Flathead								
13A02M	Desert Mountain	5600	54	8.4	3/29	7.8	5.9	7.4
13A05M	Marias Pass	5250	54	6.5	3/31	5.7	4.5	5.4
Clark Fork								
13C15M	Georgetown Lake	6450	48	9.0*	4/2	3.2	2.5	-
13B19M	Seeley Lake	4030	48	11.9*	4/2	10.0	3.0	-
13C02M	Skalkaho Summit	7260	48	10.8	4/1	8.9	-	-
Bitterroot								
13D18M	Gibbons Pass	7100	48	7.1	4/2	5.4	5.5	-
14C05M	Lolo Pass	5250	48	10.6*	3/26	7.2	5.4	-
			MISSOURI RIVER BASIN					
Beaverhead								
11E13M	Lakeview	6700	48	15.3			8.8	-
Madison								
10D04M	Red Bluff	4800	40	4.7	3/31	2.3	3.3	-
Gallatin								
11D02M	College Site	4856	54	14.5	4/2	10.4	12.1	11.2
11E06M	Twenty-One Mile	7150	48	8.8	3/27	1.6	3.6	-
Missouri Main Stem								
10C01M	Kings Hill	7420	48	11.8	3/31	8.2	7.8	-
12C08M	Stemple Pass	6230	48	5.9	3/30	4.2	4.7	-
Yellowstone								
10D11M	Battle Ridge	6020	48	17.6*	3/25	15.4	9.9	-
10D07M	Northeast Entrance	7350	48	9.4	3/28	5.8	8.0	-

**AVERAGE FOR PERIOD OF RECORD *Revised

SOIL MOISTURE DATA

As of April 1, 1965

(Inches)

Soil moisture station			Snow data				Past records	
No.	Name	Elevation	Depth	Water equivalent	Date of survey	Soil moisture	April mean	**April 1964
	COLUMBIA RIVER BASIN							
	Kootenai							
15S13M	Bertha Trail	2900	45	5.5	4/1	6.2	-	-
15A12M	Murphy Lake R. S.	3000	45	22.0	4/2	22.3	-	-
15A02M	Seven R. S.	3040	45	23.0	4/1	21.2	-	-
	Flathead							
17A12M	Swan Mountain	3600	34	8.4	3/29	7.8	7.7	9.4
17A05M	Martin Pass	5850	34	9.3	3/31	5.7	4.5	5.4
	Clark Fork							
18A08M	Georgetown Lake	6450	48	9.0*	4/2	3.2	2.5	-
18A06M	Seeley Lake -	[illegible]	48	11.0*	4/2	10.0	3.0	-
18C02M	Stevensville Branch	3600	48	18.8	4/1	8.9	-	-
	Bitterroot							
19C08M	Gibbons Pass	7200	48	7.1	4/2	3.6	3.3	-
19C09M	Lolo Pass	6250	48	10.0*	3/29	7.2	5.4	-
	MISSOURI RIVER BASIN							
	Beaverhead							
11E14M	Lakeview	6700	48	16.3		-	2.0	-
	Madison							
10D02M	Red Mountain	4800	40	4.7	3/31	2.3	3.3	-
	Gallatin							
11D02M	Gallatin Gate	4800	54	14.4	4/3	10.4	12.1	12.2
11D03M	Taylor Fork Ridge	7000	48	4.0	3/27	1.0	3.5	-
	Missouri Main Stem							
10C03M	Elkhorn Mills	4400	44	12.8	3/25	8.3	7.8	-
10C08M	Steeple Rock	6200	48	3.8	3/30	4.2	4.7	-
	Yellowstone							
12C01M	Bridge Ridge	8000	49	17.0*	3/28	15.4	9.9	-
12D03M	Hellroaring Ridge	7300	49	9.4	3/28	5.2	8.0	-

*Average for three or more. **Previous

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1965

(1000 Acre Feet)

BASIN	RESERVOIR	USEABLE CAPACITY	USEABLE STORAGE THIS YEAR	USEABLE STORAGE LAST YEAR	USEABLE STORAGE AVERAGE
COLUMBIA RIVER BASIN					
Flathead	Hungry Horse	3,428.0	1,567.0	2,099.0	2,244.4**
	Flathead Lake	1,791.0	958.1	722.9	690.8
	Camas 1/	45.2	22.0	19.4	33.8
	Mission Valley 2/	100.3	37.7	22.6	37.2
Clark Fork	Georgetown Lake	31.0	23.9	25.6	21.8
	Noxon Rapids	334.6	150.4	155.2	-
Bitterroot	Como	34.9	17.2	9.6	13.4
	Painted Rocks	31.7	-	-	15.1**
MISSOURI RIVER BASIN					
Beaverhead	Clark Canyon	255.6	85.7	-	-
	Lima	84.0	46.3	15.0	27.3
Ruby	Ruby	38.8	-	-	26.1**
Madison	Hebgen Lake	384.8	224.4	211.3	179.1
	Ennis Lake	41.0	14.4	39.2	36.4
Gallatin	Middle Creek	8.0	4.0	3.2	3.9**
Missouri	Canyon Ferry	2,043.0	1,643.0	1,726.0	1,529.0**
	Hauser & Helena	61.9	57.9	52.5	44.8
	Lake Helena	10.4	9.0	7.2	5.6
	Holter Lake	81.9	15.0	22.9	51.7
	Smith River	10.7	8.8	7.6	6.5**
	Ackley Lake	5.8	-	-	3.8
	Durand	7.0	6.8	4.5	4.9
	Martinsdale	23.1	7.3	7.6	8.8
	Deadman's Basin	72.2	52.7	55.0	41.6**
	Fort Peck	19,410.0	15,250.0	11,700.0	10,875.4
Sun	Gibson	105.0	49.8	17.9	60.5
	Willow Creek	32.3	16.1	21.2	21.0
	Pishkun	32.0	17.1	17.1	18.2
Marias	Lower Two Medicine	16.6	-	-	0.0
	Four Horns	19.2	-	-	10.5
	Swift	30.0	-	11.9	23.9
	Lake Francis	112.0	84.8	34.3	92.8
	Tiber	1,313.0	691.8	650.9	647.4**
Milk	Fresno	127.2	83.3	36.6	81.5
	Nelson	66.8	33.9	30.0	34.9
	Lake Sherburne	66.1	18.7	18.4	24.4
Yellowstone	Mystic Lake	20.8	4.8	5.7	4.8
	Tongue River	68.0	-	-	21.1
	Cooney	27.5	14.8	19.1	13.5**

1/ Sum of four small reservoirs on west side of Flathead Lake.
2/ Sum of eight small reservoirs in Mission Valley not including Jocko Lake.

NOTE: ALL AVERAGES BASED ON 1948-1962 (15 YEAR PERIOD). **AVERAGE FOR PERIOD OF RECORD

RESERVOIR STORAGE DATA

AS OF MARCH 31, 1964

(Acre feet)

BASIN	RESERVOIR	USABLE STORAGE: USEABLE CAPACITY	USABLE STORAGE: THIS YEAR	USABLE STORAGE: LAST YEAR	USABLE STORAGE: AVERAGE
COLUMBIA RIVER BASIN					
Flathead	Hungry Horse	2,428.0	1,567.0	2,299.0	2,244.1**
	Flathead Lake	1,791.0	956.1	722.9	990.8
	Swan 1/	[illegible]	22.0	19.4	32.8
	Kerlins Valley 2/	100.3	37.7	22.6	37.2
Clark Fork	Georgetown Lake	35.0	23.9	25.6	21.8
	Seven Dogleg	144.5	150.4	135.2	--
Bitterroot	Como	34.9	17.2	9.6	13.4
	Painted Rocks	11.7	-	-	19.1**
MISSOURI RIVER BASIN					
Beaverhead	Clark Canyon	295.5	55.7	-	-
	Lima	92.0	46.3	15.0	27.2
Ruby	Ruby	34.8	-	-	20.1**
Madison	Hebgen Lake	385.8	224.4	211.3	177.1
	Ennis Lake	41.2	14.4	5.2	3.4
Gallatin	Middle Creek	[illegible]	4.0	1.2	3.9**
Missouri	Canyon Ferry	2,043.0	1,862.0	1,750.0	1,329.0**
	Hauser & Holmes	61.7	57.5	32.3	44.8
	Lake Helena	10.4	9.0	7.2	5.4
	Holter Lake	81.9	14.0	22.0	31.7
	Smith River	10.7	3.8	7.6	6.5**
	Ackley Lake	5.4	-	-	2.8
	Tiverton	7.0	6.4	4.5	4.9
	Gwinnedah	23.1	7.3	7.3	8.3
	Freeman's Marsh	22.4	14.7	35.0	41.6**
	Nelson Park	19,410.0	15,250.0	11,700.0	10,872.4
Sun	Gibson	104.3	49.4	1.4	45.3
	Willow Creek	32.3	24.1	21.4	21.0
	Pishkun	32.0	17.1	17.1	15.2
Marias	Lower Two Medicine	13.5	-	-	0.0
	Four Horns	70.3	-	-	10.3
	Swift	30.3	-	11.9	23.8
	Lake Frances	112.1	84.8	34.1	92.4
	Tiber	1,173.0	481.8	655.5	847.1**
Milk	Fresno	132.1	43.1	30.4	45.5
	Nelson	84.8	57.5	30.0	32.9
	Lake Sherburne	64.1	53.7	18.4	22.4
Yellowstone	Cooney Lake	70.3	4.0	5.7	4.8
	Tongue River	68.0	-	-	21.1
	Cooney	57.5	14.8	19.1	13.1**

1/ One of four small reservoirs on west side of Flathead Lake.
2/ One of eight small reservoirs in Kerlins Valley and including Jocko Lake.

NOTE: ALL AVERAGES BASED ON 1949-1963 THE YEAR PRIOR. *STORAGE FOR PERIOD ON RECORD

Agencies Cooperating in Collecting Data Contained in this Bulletin

U. S. Forest Service
Region I, Missoula, Montana

U. S. Geological Survey
Helena, Montana

U. S. Army Corps of Engineers
Portland, Oregon
Seattle, Washington
Omaha, Nebraska

U. S. Indian Irrigation Service
St. Ignatius, Montana

U. S. Weather Bureau
Helena, Montana

U. S. Bureau of Sports Fisheries and Wildlife
Red Rock Lakes Refuge
Monida, Montana

U. S. Bureau of Reclamation
Billings, Montana
Boise, Idaho

Montana Power Company
Butte, Montana

Agricultural Experiment Station
North Montana Branch Station
Havre, Montana

State Water Conservation Board
Helena, Montana

National Park Service
Yellowstone National Park
Glacier National Park

Montana Experiment Station
Montana State College
Bozeman, Montana

Bonneville Power Administration
Portland, Oregon

Montana State University
School of Forestry
Missoula, Montana

Soil Conservation Service
Montana, Wyoming, Idaho

Soil and Water Conservation Districts
Montana Counties

Johnson Flying Service, Inc.
Missoula, Montana

Water Rights Branch, Dept. of Lands and Forests
Victoria, British Columbia

Department of Northern Affairs and National Resources
Calgary, Alberta

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